

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of claims:

5 Claims 1-15 (canceled).

Claim 16 (new): A method for matching the data rate of a data stream in a communications device, the method comprising:

10 subdividing the data stream into at least one data block containing transmission bits for transmission;

 forming the transmission bits from a coding process from input bits bearing information;

 removing specific transmission bits from a data block of the data stream to match the data rate;

15 specifying, by a puncturing pattern, the transmission bits to be removed; and designing the puncturing pattern such that transmission bits are removed which are dependent via the coding process on few input bits;

 wherein the puncturing pattern comprises:

20 determining a cumulative puncturing strength which specifies which component of the information bits was removed from the data block by removal of transmission bits;

 forming a decision function depending on the cumulative puncturing strength; and

 minimizing the decision function to determine the puncturing pattern.

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Claim 17 (new): A method for matching the data rate of a data stream in a communications device as claimed in claim 16, wherein the puncturing pattern effects puncturing, viewed from a front end of the data block to be punctured, such that a section consists of a section having a bit sequence 1, 4, 2, 3, 8, 7, 5, 6, 15, 12, 30 14, 11, 10, 9, where 1 corresponds to a first bit position.

Claim 18 (new): A method for matching the data rate of a data stream in a communications device as claimed in claim 16, wherein the puncturing pattern effects a puncturing, viewed from a back end of the data block to be punctured, such that a section consists of a section having a bit sequence 0, 4, 6, 1, 2, 15, 12, 5 14, 10, 9, 7, 4, 5, 18, 13, 8, where 0 corresponds to a last bit position.

Claim 19 (new): A method for matching a data rate of a data stream in a communication device as claimed in claim 16, wherein the puncturing pattern uses a puncturing rate to specify a gap between the transmission bits to be removed, 10 such that the puncturing rate differs for different areas in the data block.

Claim 20 (new): A method for matching a data rate of a data stream in a communication device as claimed in claim 19, wherein the puncturing rate in a middle area of the data block features substantially equidistant gaps between the 15 bits to be removed.

Claim 21 (new): A method for matching a data rate of a data stream in a communication device as claimed in claim 16, wherein the puncturing pattern is embodied such that 8 of 48 bits are punctured, the eight bits being 1, 2, 4, 8, 42, 45, 20 47, 48.

Claim 22 (new): A method for matching a data rate of a data stream in a communication device as claimed in claim 16, wherein the puncturing pattern is embodied such that 31 of 111 bits are punctured, the punctured bits being 1, 2, 3, 4, 25 5, 6, 7, 8, 12, 14, 15, 24, 42, 48, 54, 57, 60, 66, 69, 96, 99, 101, 102, 104, 105, 106, 107, 108, 109, 110, 111.

Claim 23 (new): A method for matching a data rate of a data stream in a communication device as claimed in claim 16, wherein the puncturing pattern is 30 embodied such that 14 of 54 bits are punctured, the punctured bits being 1, 2, 3, 4, 7, 8, 36, 39, 42, 48, 51, 52, 53, 54.

Claim 24 (new): A method for matching a data rate of a data stream in a communication device as claimed in claim 16, wherein the puncturing pattern is embodied such that 14 of 54 bits are punctured, the punctured bits being 1, 2, 3, 4, 6, 7, 8, 39, 45, 48, 51, 52, 53, 54.

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Claim 25 (new): A method for matching a data rate of a data stream in a communication device, the method comprising:

subdividing the data stream into at least one data block containing transmission bits to be transmitted;

10 forming the transmission bits from a coding process from input bits bearing information;

repeating, to match the data rate, specific transmission bits from a data block of the data stream;

specifying the transmission bits to be repeated by a repetition pattern; and

15 designing the repetition pattern such that transmission bits are repeated which are dependent via the coding process on many input bits;

wherein the repetition pattern comprises:

determining a function of a cumulative repetition strength which specifies which component of the input bits was repeated by repeating transmission bits in the data block;

20 forming a decision function depending on the cumulative repetition strength; and

maximizing a decision function to determine the repetition pattern.

25 Claim 26 (new): A method for matching a data rate of a data stream in a communication device as claimed in claim 25, wherein a repetition rate of the repetition pattern which specifies a gap between the bits to be repeated requires substantially equidistant gaps in a middle area of the data block and at an edge of the data block and requires gaps that are large enough for no bit to be repeated.

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Claim 27 (new): A method for matching a data rate of a data stream in a communication device as claimed in claim 25, wherein the repetition pattern is designed such that 4 of 36 bits are repeated, the repeated bits being 16, 18, 20, 22.

5 Claim 28 (new): A method for matching a data rate of a data stream in a communication device as claimed in claim 25, wherein the data block in which the rate matching is performed includes data coded with a convolution code.

10 Claim 29 (new): A communications device, comprising a rate matching device for puncturing a data block of a data stream directed to the rate matching device in accordance with a specific rate matching pattern for matching a data rate of the data stream, wherein the data stream is subdivided into at least one data block containing transmission bits to be transmitted, the transmission bits are formed from a coding process from input bits bearing information, specific transmission 15 bits are removed from the data block of the data stream to match the data rate, the transmission bits to be removed are specified by a puncturing pattern, and the puncturing pattern is designed such that transmission bits are removed which are dependent via the coding process on few input bits, and wherein the puncturing pattern includes determining a cumulative puncturing strength which specifies which component of the information bits was removed from the data block by 20 removal of transmission bits, forming a decision function depending on the cumulative puncturing strength and minimizing a decision function to determine the puncturing pattern.

25 Claim 30 (new): A communications device as claimed in claim 29, wherein the communications device is one of a UMTS mobile radio transmitter and a UMTS mobile radio receiver.

30 Claim 31 (new): A communications device, comprising a rate matching device for repetition of a data block of a data stream directed to the rate matching device in accordance with a specific rate matching pattern for matching a data rate

of the data stream, wherein the data stream is subdivided into at least one data block containing transmission bits to be transmitted, the transmission bits are formed from a coding process from input bits bearing information, specific transmission bits are repeated from a data block of the data stream to match the data rate, the
5 transmission bits to be repeated are specified by a repetition pattern, and the repetition pattern is designed such that transmission bits are repeated which are dependent for the coding process on many input bits, and wherein the repetition pattern includes determining a cumulative repetition strength which specifies which component of the input bits was repeated by repeating transmission bits in the data
10 block, forming a decision function depending on the cumulative repetition strength and maximizing the decision function to determine the repetition pattern.

Claim 32 (new): A communication device as claimed in claim 31, wherein the communications device is one of a UMTS mobile radio transmitter and a
15 UMTS mobile radio receiver.